

**AMENDMENTS TO THE CLAIMS**

**1-2. (Cancel)**

**3. (Currently Amended)** ~~The method according to claim 2A~~ method of introducing a nucleic acid into cells by electroporation, comprising  
the step (a) of providing an electrode with a cationic surface;  
the step (b) of adsorbing and loading a nucleic acid onto the cationic surface of an electrode;  
the step (c) of allowing cells to adhere onto the surface of the nucleic acid-loaded electrode obtained in the step (b); and  
the step (d) of applying electric pulses to the cells, wherein the electrode with a cationic surface is an electrode on which a monolayer of a thiol, disulfide or sulfide compound having an anionic functional group at the terminal is formed and a cationic polymer is adsorbed onto the surface of the monolayer.

**4. (Currently Amended)** ~~The method according to claim 2A~~ method of introducing a nucleic acid into cells by electroporation, comprising  
the step (a) of providing an electrode with a cationic surface;  
the step (b) of adsorbing and loading a nucleic acid onto the cationic surface of an electrode;  
the step (c) of allowing cells to adhere onto the surface of the nucleic acid-loaded electrode obtained in the step (b); and  
the step (d) of applying electric pulses to the cells, wherein the electrode with a cationic surface is an electrode on which a monolayer of a thiol, disulfide or sulfide compound having a cationic functional group at the terminal or a silanising agent having a cationic functional group at the terminal is formed, an anionic polymer is adsorbed onto the surface of the monolayer and a cationic polymer is further adsorbed onto its surface.

**5. (Currently Amended)** ~~The method according to claim 2A~~ method of introducing a nucleic acid into cells by electroporation, comprising  
the step (a) of providing an electrode with a cationic surface;  
the step (b) of adsorbing and loading a nucleic acid onto the cationic surface of an electrode;

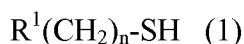
the step (c) of allowing cells to adhere onto the surface of the nucleic acid-loaded electrode obtained in the step (b); and  
the step (d) of applying electric pulses to the cells, wherein the electrode with a cationic surface is a transparent electrode on which a cationic polymer is adsorbed.

**6-9. (Cancelled)**

**10. (Original)** The method according to claim 5, wherein the transparent electrode is a glass or a transparent plastic substrate on which indium-tin oxide, indium oxide, aluminum-doped zinc oxide or antimony-doped tin oxide is deposited.

**11. (Original)** The method according to claim 5, wherein the transparent electrode is a glass substrate or a transparent plastic substrate on which indium-tin oxide is deposited.

**12. (Previously Presented)** The method according to claim 3, wherein the electrode with a cationic surface is an electrode on which the monolayer of a thiol compound having an anionic functional group at the terminal is formed and a cationic polymer is adsorbed onto the surface of the monolayer, and the thiol compound having an anionic functional group at its terminal is a thiol compound indicated by the formula (1):



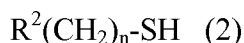
wherein  $R^1$  represents an anionic functional group and  $n$  represents an integer of 1 to 40.

**13. (Previously Presented)** The method according to claim 12, wherein  $R^1$  is a group selected from the group consisting of a carboxyl group, a phosphate group, a sulfo group and a phosphonic acid group.

**14. (Previously Presented)** The method according to claim 12, wherein the thiol compound represented by the formula (1) is a mercaptoalkanoic acid selected from 11-mercaptopundecanoic acid, 8-mercaptooctanoic acid and 15-mercaptohexadecanoic acid.

**15. (Previously Presented)** The method according to claim 3, wherein the cationic polymer is a polymer selected from a polyethyleneimine, polyallylamine, polyvinylamine, polyvinylpyridine, aminoacetalized poly(vinyl alcohol), acrylic or methacrylic polymer having primary to quaternary amine at the terminal of the side chain, acid-treated gelatin, protamine, polylysine, polyornithine, polyarginine, chitosan, DEAE-cellulose, DEAE-dextran and polyamidoamine dendrimer.

**16. (Previously Presented)** The method according to claim 4, wherein the electrode with a cationic surface is an electrode on which a monolayer of a thiol compound having a cationic functional group at the terminal is formed, an anionic polymer is adsorbed onto the surface of the monolayer and a cationic polymer is further adsorbed onto its surface, and the thiol compound having a cationic functional group at the terminal is a thiol compound represented by the formula (2):



wherein  $R^2$  represents a cationic functional group and  $n$  represents an integer of 1 to 40.

**17. (Previously Presented)** The method according to claim 16, wherein  $R^2$  is an amino group.

**18-19. (Cancelled)**

**20. (Currently Amended)** ~~The method according to claim 1~~ A method of introducing a nucleic acid into cells by electroporation, comprising  
the step (A) of loading a nucleic acid onto the surface of an electrode;  
the step (B) of allowing cells to adhere onto the surface of the obtained nucleic acid-loaded electrode; and  
the step (C) of applying electric pulses to the adhering cells, wherein the step (B) is carried out by incubating cells on the nucleic acid-loaded electrode.

**21. (Currently Amended)** ~~The method according to claim 2A~~ A method of introducing a nucleic acid into cells by electroporation, comprising  
the step (a) of providing an electrode with a cationic surface;  
the step (b) of adsorbing and loading a nucleic acid onto the cationic surface of an electrode;  
the step (c) of allowing cells to adhere onto the surface of the nucleic acid-loaded electrode obtained in the step (b); and  
the step (d) of applying electric pulses to the cells, wherein the step (c) is carried out by incubating cells on the surface of the nucleic acid-loaded electrode.

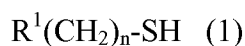
**22. (Cancelled)**

**23. (Cancelled)**

**24. (Currently Amended)** ~~The method according to claim 2A~~ A method of introducing a nucleic acid into cells by electroporation, comprising  
the step (a) of providing an electrode with a cationic surface;  
the step (b) of adsorbing and loading a nucleic acid onto the cationic surface of an electrode;  
the step (c) of allowing cells to adhere onto the surface of the nucleic acid-loaded electrode obtained in the step (b); and  
the step (d) of applying electric pulses to the cells, wherein an electrode with the cationic surface electrode is an electrode having a micropatterned surface.

**25. (Previously Presented)** An electrode with a cationic surface wherein a monolayer of a thiol, disulfide or sulfide compound having an anionic functional group at the terminal is formed and a cationic polymer is adsorbed onto the surface of the monolayer.

**26. (Previously Presented)** An electrode with a cationic surface wherein a monolayer of a thiol compound represented by the formula (1):



, wherein R1 represents an anionic functional group and n represents an integer of 1 to 40,

is formed on the surface of a gold electrode substrate prepared by depositing gold onto a glass substrate and a cationic polymer is adsorbed onto the surface of the monolayer.